## ABSTRACT

A retiming function that defines a rampable retiming effect is used to generate new audio and video samples at appropriate output times. In particular, for each output time, a corresponding input time is determined from the output time by using the retiming function. The retiming function may be a speed curve, a position curve that maps output times to input times directly or a mapping defining correspondence times between points in the video data and points in the audio data. An output sample is computed for the output time based on at least the data in the neighborhood of the corresponding input time, using a resampling function for the type of media data. Synchronization is achieved by ensuring that the input times determined to correspond to output times for video samples correspond to the input times determined to correspond to the same output times for audio samples.